AMENDMENT AND RESPONSE UNDER 37 CFR § 1.116

Serial Number: 10/602,320 Filing Date: June 24, 2003

Title: FLASH MEMORY BLANK CHECK

Assignce: Intel Corporation

IN THE CLAIMS

Please amend the claims as follows:

 (Currently Amended) A method of programming a FLASH memory device comprising: issuing a blank check command to a command register within the FLASH memory device, wherein the blank check command specifies a specified block to blank check;

reading a status bit in a status register within the FLASH memory device to verify that at least a portion of the FLASH memory device is blank; and

checking a signal level on a conductor coupled to the FLASH memory device to verify that the specified block is blank; and

programming memory locations within the portion specified block of the FLASH memory device verified as blank.

- 2. (Currently Amended) The method of claim 1 further comprising checking a busy bit in the FLASH memory device adapted to signify that the status bit signal level on the conductor is valid.
- 3. (Original) The method of claim 1 wherein issuing a blank check command comprises: issuing a blank check setup command; and issuing a blank check confirm command.
- 4. (Canceled).
- 5. (Currently Amended) The method of claim [[4]] 1 further comprising repeating the method issuing, checking, and programming for more than one block in the memory device.
- 6. (Currently Amended) The method of claim [[4]] 1 further comprising repeating the method issuing, checking, and programming for each block in the memory device.

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7. (Currently Amended) A method of blank checking and programming a FLASH memory device comprising:

receiving a blank check command from a device external to the FLASH memory device, wherein the blank check command specifies a specified block to blank check;

in response to the blank check command received from a device external to the FLASH memory device, reading a plurality of memory locations in at least one the specified block of the FLASH memory device;

writing to a bit in a status register to indicate whether the at least one block is blank, wherein the status register is accessible by the device external to the FLASH memory device; and

asserting a signal on a conductor coupled to the device external to the FLASH memory device to signify that the specified block is blank; and

receiving data to be programmed in the at least one specified block.

- 8. (Original) The method of claim 7 wherein receiving a blank check command comprises: receiving a blank check setup command; and receiving a blank check confirm command.
- 9. (Currently Amended) The method of claim 7 wherein reading a plurality of memory locations comprises reading each memory location in the at least one specified block.
- 10. (Currently Amended) The method of claim 7 further comprising:
 setting a busy bit adapted to signify the FLASH memory device is busy; and
 clearing the busy bit after writing to the bit in the status register asserting the signal on
 the conductor to signify that the specified block is blank.
- 11. (Canceled)
- 12. (Canceled)

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- 13. (Currently Amended) A memory device comprising:
 - a FLASH memory core;

a control block adapted to blank check at least a portion a specified block of the FLASH memory core; and

an external interface to allow communication between the control block and a device external to the memory device, the external interface including a command register to receive a blank check command that specifies the specified block, wherein the control block is capable of blank checking the at least a portion specified block of the FLASH memory core during a programming operation when the memory device is in use in a system, and wherein the control block is further capable of asserting a signal on a conductor external to the memory device to signify that the specified block is blank.

- 14. (Currently Amended) The memory device of claim 13 wherein the external interface comprises a status register adapted to signify that the at least a portion of the FLASH memory eore is blank memory device is busy.
- 15. (Original) The memory device of claim 13 wherein the control block comprises a state machine.
- 16. (Original) The memory device of claim 13 wherein the control block comprises a microcontroller.
- 17. (Canceled)
- 18. (Currently Amended) The memory device of claim 17 13 wherein the external interface further includes a status register.
- 19. (Currently Amended) An apparatus including a medium adapted to hold machine-accessible instructions that when accessed result in a machine performing:

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issuing a blank check command to a command register within a FLASH memory device, wherein the blank check command specifies a specified block to blank check;

reading a status bit in a status register within the FLASH memory device to verify that at least a portion of the FLASH memory device is blank; and

checking a signal level on a conductor coupled to the FLASH memory device to verify that the specified block is blank; and

programming memory locations within the portion specified block of the FLASH memory device verified as blank.

20. (Currently Amended) The apparatus of claim 19 wherein the instructions, when accessed, further result in the machine performing:

checking a busy bit prior to reading the status bit checking the signal level on the conductor coupled to the FLASH memory.

- 21. (Original) The apparatus of claim 19 wherein issuing a blank check command comprises: issuing a blank check setup command; and issuing a blank check confirm command.
- 22. (Currently Amended) The apparatus of claim 19 wherein the instructions, when accessed, further result in the machine performing:

issuing blank check commands and reading the status bit checking the signal level on the conductor for more than one block in the memory device.

- 23. (Currently Amended) An electronic system comprising:
 - a direct conversion receiver;
 - a processor coupled to the direct conversion receiver; and
- a memory device coupled to the processor, the memory device including a FLASH memory core, a control block adapted to blank check at least a portion a specified block of the FLASH memory core, and an external interface to allow communication between the control block and the processor, the external interface including a command register to receive a blank

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check command that specifies the specified block, wherein the control block is capable of blank checking the at least a portion specified block of the FLASH memory core during a programming operation by the processor, and wherein the control block is further capable of asserting a signal on a conductor external to the memory device to signify that the specified block is blank.

24. (Original) The electronic system of claim 23 wherein the control block comprises a microcontroller.

- 25. (Canceled)
- 26. (Currently Amended) An electronic system comprising:
 - a direct conversion receiver;
 - a FLASH memory device;
- a processor coupled to the direct conversion receiver and the FLASH memory device; and

an article having a machine accessible medium holding instruction that when accessed result in the processor issuing a blank check command to a command register within the FLASH memory device wherein the blank check command specifies a specified block to blank check, reading a status bit in a status register within the FLASH memory device to verify that at least a portion of the FLASH memory device is blank checking a signal level on a conductor coupled to the FLASH memory device to verify that the specified block is blank, and programming memory locations within the portion specified block of the FLASH memory device verified as blank.

27. (Original) The electronic system of claim 26 wherein issuing a blank check command comprises:

issuing a blank check setup command; and issuing a blank check confirm command.

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28. (Currently Amended) The electronic system of claim 26 wherein the instructions, when accessed, further result in the machine performing:

issuing blank check commands and reading the status bit checking the signal level on the conductor for more than one block in the FLASH memory device.